

## Phenomenon of Poverty in the Regions of Slovakia

EVA LITAVCOVÁ<sup>1</sup>, SYLVIA JENČOVÁ<sup>1</sup>, TADEÁŠ LITAVEC<sup>2</sup>

<sup>1</sup>*Faculty of Management, Prešov University in Prešov*

Konštantínova 16, 080 01 Prešov

Slovakia

eva.litavcova@unipo.sk, sylvia.jencova@unipo.sk

<sup>2</sup>*NAFC - Soil Science and Conservation Research Institute Bratislava,  
Regional workplace in Prešov*

Gagarinova 10, 82713 Bratislava, Reimanova 1, 080 01 Prešov

Slovakia

t.litavec@vupop.sk

### Abstract

*The most important economic subject in today's world is poverty. Poverty has been one of the great ethical, economic and social issues to plague human civilization since its inception. This paper will attempt to highlight the theoretical, methodological and practical importance of indicators of poverty in the Slovak Republic, as well as the region (NUTS III). Regression analysis will be used to quantify the relationships between these indicators and other variables.*

**Key words:** poverty, regression analysis

**JEL Classification:** C29, F22, J64

### 1 Introduction

In today's world, inequality and poverty constantly create a rift between rich and poor that is growing on a global and national scale in different European countries. The term poverty has no precise definition. Poverty is often associated with the concept of inequality, but these are not identical concepts, although they are related. The research provides some statistical measurements to help define the concept of poverty and the one used most often cited is associated with individual or household income that is below a certain threshold poverty level (Laca, 2011).

Poverty has many dimensions beyond the narrow definition based only on revenue shortfalls. It includes many other aspects, including mental stress, feelings of vulnerability to external events, a sense of helplessness and underachievement. But these, as well as other non-material dimensions of poverty are difficult to measure (Michálek, 2000).

As mentioned above, poverty is often associated with inequality. Production and distribution mechanisms in a market economy (low labor productivity, unequal access to material resources,

unequal share of the distributions of production, which leads to the marginalization of certain groups within a population) produce not only wealth but also poverty, which are extreme expressions of social inequalities (i.e., the bipolarity of wealth and poverty). Although both phenomena are, however, interdependent, it is a relationship and not an identity. Poverty can be understood as an expression of extreme inequality, respectively, as distance from a certain part of the population not only rich, but also from the rest of the population. In today's world, inequality and poverty still generate a discrepancy between wealth and poverty that is increasing on a global (poor and rich countries), as well as on a national scale (poor and rich citizens), (Mareš, 1999).

The number of EU citizens at risk of poverty or social exclusion increased in 2011 to nearly 119,600,000 people, which is 24% of the population of the European Union (for individual cases, the amount of decrease amounted to less than two dollars a day). Compared to the previous year when salaries grew by 0.7%. Among EU countries, the worst poverty is suffered by Bulgaria (49%), with Romania, Latvia and the Czech Republic least affected (15%), similar to the Benelux countries. In the Slovak Republic poverty is increasing, not only in terms of the number of people affected by it, but in the affect it is having on them.

According to (Jenčová and Litavcová, 2013) Slovakia has a poverty rate of 13%, which equates to about 700 000 people. By (Velčická and Vlačucha, 2011), (Vlačucha and Kováčová, 2013) the survey of income and living conditions, titled EU SILC 2011 (European Union Statistics on Income and Living Conditions), found that the greatest misery is suffered mostly by the unemployed. Their risk is three times greater than the average person's. The risk of poverty has risen the most for working families trying to survive with three or more children. According to the EU SILC 2011 those at risk of poverty or social exclusion totaled 1 112 200 people, representing 20.6% of Slovakia's total population. Average household income lags the most in the Presov Region and is highest in the Bratislava region. The quantification limit for the risk of poverty takes into account the so-called median equivalent disposable income. The risk of poverty threshold is defined as 60% of the national median equivalised disposable income. Statistics on Income shows 2010 was the year when the effects of the economic crisis on employment and household income became manifested. The increase in poverty during this period became the European challenge.

Slovakia is among the countries with the lowest risk of poverty in the EU. This indicator is calculated for each country in relation to their national poverty lines. Slovak citizens whose income is below 60% of the median income of the population of the Slovak Republic face a 13% risk of living in poverty. The poverty threshold for one-person households is € 3,784 per year. So a one person household with this level of income subsists off of € 315 per month. Compared to 2010, there has been a three percent increase, where the risk of poverty threshold was € 3,670/year, that is € 306 per month. According to the EU SILC 23009, the poverty threshold was € 3,403/year, an increase compared to 2008 (€ 3,223/year) of 5.6%. The highest annual increase was 9.5%, which occurred between the 2007 and 2008, which accounted for a one-person household subsisting on € 269/month.

The state continued its fight against poverty by establishing the Institute for Subsistence Law, whose mission was to define reference categories. Those whose monthly income is below the minimum fixed amount set by the institute are entitled to receive social assistance benefits. The Gini coefficient is a tool for measuring pension inequality, defined by  $G = B / (A + B)$ ,  $<0,1>$  and

represents the area ratio between the actual and the ideal curves, i.e. the area of the triangle. This is the area between the Lorenz curve and the line of absolute equality. It measures the unevenness of income distribution. The larger value on a scale from 0 (absolute equality) to 100 (absolute inequality), the greater the non-uniformity (Jurečka, 2010), (Parkin, 1990), (Paufová, and Želinský, 2012).

The purpose of the paper is to detect statistical links between poverty, unemployment and population movements in the form of moving or driving away for a work. Here are revealed relations in individual regions of Slovakia and across the SR. Contribution of the paper is a detailed reporting of revealed connections and identified regional differences.

## 2 Analysis of Relationships Between Poverty, Unemployment and Movement of Persons Across Regions

It is interesting to examine the dependence of the variables relating to poverty, unemployment, population movements and labor migration within each of the eight regions of Slovakia (Tab. 1-4) and a summary for the entire SR (Tab. 5 and 6). There were annual time series of the number of citizens living below the poverty level (*poverty*), the number of citizens employed abroad (*empl. abroad*), and the number of unemployed (*unempl.*) Also, the number of emigrants (*evicted*) citizens in the years 2000 to 2012 were available, but time series were only complete for more detailed migration variables and unemployment. For all of the SR these variables were determined also using the Gini coefficient and S80/S20 coefficient. Input data were obtained from databases, i.e. ŠÚ SR and EU SILC.

**Tab. 1 Regression analysis  $\hat{Y} = a + bX$ ,  $\hat{X} = a + bY$  of studied variables for the Bratislava and Trnava regions**

$\begin{matrix} X \\ Y \end{matrix}$	Reg.	$\bar{x}$	$\sigma$	$r_{XY}$	$r_{XY}^2$	t	p	N	$\begin{matrix} a \\ \text{dep.: } Y \end{matrix}$	$\begin{matrix} b \\ \text{dep.: } Y \end{matrix}$	$\begin{matrix} a \\ \text{dep.: } X \end{matrix}$	$\begin{matrix} b \\ \text{dep.: } X \end{matrix}$
poverty	BA	40.1	4.8									
empl. abroad	BA	4.5	0.7	0.528	0.279	1.524	0.178	8	1.419	0.076	23.738	3.666
poverty	BA	40.1	4.8									
unempl.	BA	16.7	2.9	-0.363	0.132	-0.955	0.377	8	25.538	-0.221	50.080	-0.596
poverty	BA	39.2	4.3									
evicted	BA	3.5	0.4	0.065	0.004	0.145	0.891	7	3.285	0.005	36.439	0.794
empl. abroad	BA	4.4	0.7									
unempl.	BA	17.8	4.4	-0.711	0.505	-2.674	<b>0.032*</b>	9	37.116	-4.410	6.419	-0.115
empl. abroad	BA	4.4	0.7									
evicted	BA	3.5	0.4	0.556	0.310	1.497	0.195	7	2.297	0.270	0.418	1.145
unempl.	BA	16.6	3.1				corrected					
evicted	BA	3.5	0.4	-0.749	0.561	-2.528	0.053	7	4.878	-0.084	40.026	-6.711
poverty	TT	48.0	8.6									
empl. abroad	TT	7.3	2.5	-0.075	0.006	-0.184	0.860	8	8.309	-0.022	49.815	-0.254
poverty	TT	48.0	8.6									
unempl.	TT	27.7	6.6	0.369	0.137	0.974	0.368	8	14.000	0.285	34.711	0.479
poverty	TT	46.2	7.6									
evicted	TT	2.7	0.1	-0.136	0.019	-0.307	0.771	7	2.743	-0.002	75.407	-10.95
empl. abroad	TT	7.6	2.6									
unempl.	TT	28.6	6.8	-0.419	0.176	-1.222	0.261	9	37.002	-1.110	12.103	-0.158
empl. abroad	TT	7.0	2.6									
evicted	TT	2.7	0.1	0.547	0.299	1.460	0.204	7	2.529	0.019	-33.988	15.390
unempl.	TT	27.3	7.1									
evicted	TT	2.7	0.1	-0.223	0.050	-0.511	0.631	7	2.746	-0.003	71.981	-16.76

Source: Own processing

In the Bratislava region (Tab. 1) there is a significant negative dependence between the number of unemployed and the number of Slovak citizens working abroad. If unemployment rises by about 1000 people, then abroad are employed by 115 citizens of this region less. Model explain 50% of the variability of dependent variable. In the Trnava region the studied variables do not correlate.

In the Nitra region (Tab. 2) when 1000 persons are employed abroad, 1829 persons will rise above poverty. Model explain 65% of the variability of poverty. Moreover, if unemployment there rises by about 1000 people, about 504 fewer will be employed abroad. Model explain 77% of the variability in employment abroad. The same relation given in table 2 in Trenčín region was corrected for non-compliance with the assumptions of the linear regression model. Nonparametric Spearman's rank correlation is not significant there.

$\begin{matrix} X \\ Y \end{matrix}$	Reg.	$\bar{x}$	$\sigma$	$r_{XY}$	$r_{XY}^2$	t	p	N	$\begin{matrix} a \\ \text{dep.: } Y \end{matrix}$	$\begin{matrix} b \\ \text{dep.: } Y \end{matrix}$	$\begin{matrix} a \\ \text{dep.: } X \end{matrix}$	$\begin{matrix} b \\ \text{dep.: } X \end{matrix}$
poverty	TN	57.5	10.9									
empl. abroad	TN	11.9	1.5	-0.242	0.058	-0.611	0.564	8	13.764	-0.033	78.831	-1.793
poverty	TN	57.5	10.9									
unempl.	TN	22.5	5.4	0.209	0.044	0.523	0.620	8	16.529	0.103	48.020	0.423
poverty	TN	54.6	7.7									
evicted	TN	2.6	0.1	-0.203	0.041	-0.463	0.663	7	2.710	-0.003	94.810	-15.67
empl. abroad	TN	11.8	1.4				corrected					
unempl.	TN	22.8	5.1	-0.812	0.660	-3.685	0.008	9	57.449	-2.944	16.884	-0.224
empl. abroad	TN	12.1	1.5									
evicted	TN	2.6	0.1	-0.484	0.234	-1.237	0.271	7	2.959	-0.033	30.592	-7.216
unempl.	TN	22.2	5.8									
evicted	TN	2.6	0.1	0.362	0.131	0.868	0.425	7	2.428	0.006	-31.585	20.971
poverty	NR	94.6	10.3									
empl. abroad	NR	27.0	4.5	-0.805	0.648	-3.033	<b>0.029*</b>	7	60.499	-0.354	143.998	-1.829
poverty	NR	94.6	10.3									
unempl.	NR	45.4	9.9	0.629	0.396	1.809	0.130	7	-12.095	0.608	65.065	0.651
poverty	NR	91.4	6.3									
evicted	NR	3.0	0.1	0.117	0.014	0.236	0.825	6	2.865	0.001	60.761	10.267
empl. abroad	NR	24.8	7.4									
unempl.	NR	48.6	12.9	-0.876	0.768	-4.453	<b>0.004**</b>	8	86.489	-1.525	49.315	-0.504
empl. abroad	NR	28.2	3.6									
evicted	NR	3.0	0.1	-0.668	0.446	-1.796	0.147	6	3.368	-0.014	126.804	-33.02
unempl.	NR	42.8	7.7									
evicted	NR	3.0	0.1	0.124	0.015	0.249	0.816	6	2.937	0.001	3.651	13.101

Source: Own processing

[illegible]

evicted	ZA	2.3	0.1	-0.020	0.000	-0.045	0.966	7	2.327	-0.000	75.631	-1.853
empl. abroad	ZA	21.5	3.7									
unempl.	ZA	43.0	10.0	-0.616	0.380	-2.070	<b>0.077</b>	9	79.366	-1.691	31.162	-0.224
empl. abroad	ZA	21.8	4.0									
evicted	ZA	2.3	0.1	0.403	0.162	0.985	0.370	7	2.085	0.010	-14.264	15.604
unempl.	ZA	39.8	8.8									
evicted	ZA	2.3	0.1	-0.052	0.003	-0.117	0.911	7	2.337	-0.001	50.090	-4.444
poverty	BB	90.9	13.8									
empl. abroad	BB	13.6	2.9	-0.457	0.209	-1.258	0.255	8	22.407	-0.097	120.244	-2.158
poverty	BB	90.9	13.8				corrected					
unempl.	BB	63.8	6.5	-0.799	0.639	-3.260	0.017	8	98.069	-0.377	198.879	-1.694
poverty	BB	94.4	10.2									
evicted	BB	2.8	0.1	0.346	0.120	0.824	0.447	7	2.538	0.003	-11.343	37.227
empl. abroad	BB	13.1	3.2									
unempl.	BB	66.3	9.8	-0.289	0.084	-0.800	0.450	9	78.100	-0.899	19.264	-0.093
empl. abroad	BB	13.8	3.1									
evicted	BB	2.8	0.1	0.082	0.007	0.183	0.862	7	2.808	0.002	6.106	2.698
unempl.	BB	61.8	3.6									
evicted	BB	2.8	0.1	0.101	0.010	0.228	0.829	7	2.678	0.003	50.753	3.888

Source: Own processing

In the Žilina region (Tab. 3) the studied variables do not correlate. The relationship between poverty and unemployment in the Banská Bystrica region was corrected for non-compliance with the assumptions of the linear regression model. Nonparametric correlation is not significant there. In the Prešov region (Tab. 4) when unemployment increases by 1000 persons, the number of people living in poverty increases by 1825 persons with 71% predicted variability. If 1000 persons find work abroad, the number of poor people will fall by 2226 and unemployment will be reduced by 1193 people, by both models at 58% predicted variability. For the Košice region, if unemployment increases by 1000 people, the number of poor is increased by 507 persons at 60% and the number of persons employed abroad will be reduced by 230 persons at 88% predicted variability.

**Tab. 4 Regression analysis  $\hat{Y} = a + bX$ ,  $\hat{X} = a + bY$  of studied variables for the Prešov and Košice regions**

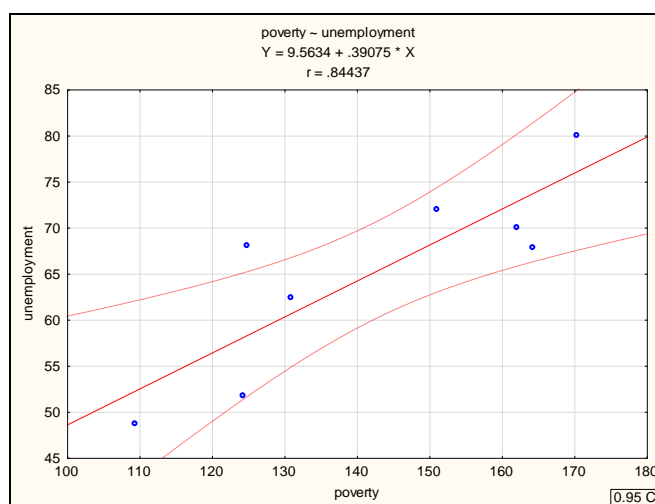
$\begin{matrix} X \\ Y \end{matrix}$	Reg.	$\bar{x}$	$\sigma$	$r_{XY}$	$r_{XY}^2$	t	p	N	$\begin{matrix} a \\ \text{dep.: } Y \end{matrix}$	$\begin{matrix} b \\ \text{dep.: } Y \end{matrix}$	$\begin{matrix} a \\ \text{dep.: } X \end{matrix}$	$\begin{matrix} b \\ \text{dep.: } X \end{matrix}$
poverty	PO	142.1	22.6									
empl. abroad	PO	39.2	7.8	-0.763	0.583	-2.894	<b>0.028*</b>	8	76.397	-0.262	229.399	-2.226
poverty	PO	142.1	22.6									
unempl.	PO	65.1	10.5	0.844	0.713	3.860	<b>0.008**</b>	8	9.563	0.391	23.348	1.825
poverty	PO	138.1	21.1									
evicted	PO	3.3	0.1	-0.085	0.007	-0.190	0.857	7	3.386	-0.001	181.653	-13.15
empl. abroad	PO	38.4	7.6									
unempl.	PO	67.4	11.9	-0.764	0.583	-3.131	<b>0.017*</b>	9	113.183	-1.193	71.371	-0.489
empl. abroad	PO	39.8	8.2									
evicted	PO	3.3	0.1	0.208	0.043	0.476	0.654	7	3.174	0.004	-1.744	12.543
unempl.	PO	63.0	9.2									
evicted	PO	3.3	0.1	-0.479	0.230	-1.221	0.277	7	3.755	-0.007	170.763	-32.56
poverty	KE	97.0	8.4									
empl. abroad	KE	15.8	3.2	-0.699	0.489	-2.394	<b>0.054</b>	8	41.428	-0.265	126.079	-1.846
poverty	KE	97.0	8.4									
unempl.	KE	66.0	12.9	0.773	0.597	2.984	<b>0.025*</b>	8	-48.215	1.177	63.519	0.507
poverty	KE	96.6	9.0									
evicted	KE	2.9	0.1	0.072	0.005	0.162	0.877	7	2.835	0.001	76.576	6.890
empl. abroad	KE	15.1	3.6									
unempl.	KE	68.8	14.7	-0.938	0.879	-7.146	<b>0.000**</b>	9	126.399	-3.819	30.922	-0.230

empl. abroad	KE	16.4	2.8									
evicted	KE	2.9	0.1	0.536	0.288	1.421	0.215	7	2.609	0.018	-29.451	15.771
unempl.	KE	63.0	10.4									
evicted	KE	2.9	0.1	-0.108	0.012	-0.243	0.818	7	2.970	-0.001	97.476	-11.85

Source: Own processing

Thus, summary:

- A significant **negative** linear statistical dependence on the number of local citizens living below the poverty line and the number of Slovak citizens working abroad has been detected in the regions of Nitra and Prešov, with a significance level of 0.1 a similar effect has been found in the Kosice region.
- A significant **positive** linear statistical dependence of citizens living below the poverty line and the number of unemployed was found in the Prešov (Graph 1) and Košice regions.



**Graph 1 Linear statistical dependence of poverty on unemployment in the Prešov region**

Source: Own processing

- A significant linear statistical dependence of citizens living below the poverty line and the number of displaced people has not been demonstrated in any region.
- A significant **negative** linear statistical dependence of Slovak citizens working abroad and the number of unemployed was found in the regions of Bratislava, Nitra, Prešov and Košice, with a significance level of 0.1 for findings from the Žilina Region.
- A significant linear statistical dependence of Slovak citizens working abroad and the number of displaced people has not been demonstrated in any region.
- A significant linear statistical dependence of the unemployed in the SR and the number of displaced people has not been demonstrated in any region.

The following table (Tab. 5) describes the relationships considered between the above variables plus relationships with Gini coefficient and S80/S20 coefficient across the SR. Of the 15 pairs examined, relationships within six variables are two-thirds of a significant linear statistical relationship.

**Tab. 5 Regression analysis  $\hat{Y} = a + bX$ ,  $\hat{X} = a + bY$  of the number of people living in poverty, employed abroad, unemployed, displaced, Gini coefficient, coefficient ratio quintiles. The data are in thousands. persons, annual values, incomplete y. 2000-2012, SR together.**

$\begin{matrix} X \\ Y \end{matrix}$	$\bar{x}$	$\sigma$	$r_{XY}$	$r_{XY}^2$	t	p	N	$\begin{matrix} a \\ \text{dep.: } Y \end{matrix}$	$\begin{matrix} b \\ \text{dep.: } Y \end{matrix}$	$\begin{matrix} a \\ \text{dep.: } X \end{matrix}$	$\begin{matrix} b \\ \text{dep.: } X \end{matrix}$
poverty	645.0	60.6									
empl. abroad	140.0	23.9	-0.806	0.650	-3.340	0.016*	8	345.244	-0.318	931.159	-2.044
poverty	645.0	60.6									
unempl.	348.2	54.9	0.848	0.719	3.914	0.008**	8	-147.31	0.768	319.283	0.935
poverty	645.0	60.6									
evicted	1.9	0.1	0.422	0.178	1.141	0.297	8	1.391	0.001	189.089	245.132
poverty	645.0	60.6									
Gini SR	25.5	1.3	0.397	0.157	1.059	0.330	8	19.941	0.009	180.672	18.190
poverty	645.0	60.6									
S80/S20	3.7	0.2	0.620	0.385	1.936	0.101	8	2.371	0.002	-41.424	184.888
empl. abroad	117.0	36.7									
unempl.	400.4	81.2	-0.903	0.815	-6.962	0.000**	13	633.903	-1.995	280.665	-0.409
empl. abroad	117.0	36.7									
evicted	1.6	0.4	0.760	0.577	3.875	0.003**	13	0.673	0.008	0.790	72.344
empl. abroad	130.9	28.9									
Gini SR	26.1	2.1	-0.581	0.338	-2.019	0.078	10	31.586	-0.042	342.036	-8.084
empl. abroad	130.9	28.9									
S80/S20	3.8	0.3	-0.717	0.514	-2.910	0.020*	10	4.718	-0.007	409.441	-73.306
unempl.	400.4	81.2									
evicted	1.6	0.4	-0.696	0.484	-3.215	0.008**	13	2.932	-0.003	635.765	-146.44
unempl.	375.3	74.9									
Gini SR	26.1	2.1	0.699	0.489	2.767	0.024*	10	18.839	0.019	-283.18	25.211
unempl.	375.3	74.9									
S80/S20	3.8	0.3	0.841	0.708	4.405	0.002**	10	2.608	0.003	-471.66	222.889
evicted	1.8	0.2									
Gini SR	26.1	2.1	-0.663	0.439	-2.504	0.037*	10	39.603	-7.543	3.309	-0.058
evicted	1.8	0.2									
S80/S20	3.8	0.3	-0.619	0.383	-2.230	0.056	10	5.514	-0.959	3.307	-0.400
Gini SR	26.1	2.1									
S80/S20	3.8	0.3	0.968	0.937	10.866	0.000**	10	0.360	0.132	-0.902	7.111

Source: Own processing

For completeness and better orientation in Table 6 within the data for the SR is given a correlation matrix, which in addition to the variables reported in Table 5 are also detailed variables involved in people moving.

**Tab. 6 Correlation analysis of the Gini coefficient, coefficient ratio quintiles, the number of people living in poverty, employed abroad, unemployed, immigrants, emigrants, increase and migration. The data are in thousands people, time series of annual values, incomplete y. 2000-2012, SR together.**

Variable	GiniSR	S80/S20	poverty	empl. abroad	unempl.	immi-grants	emi-grants	increase	migration
GiniSR	1.0000	.9677	.3968	-.5811	.6994	-.8135	-.6629	-.7784	-.8399
	N=10	N=10	N=8	N=10	N=10	N=10	N=10	N=10	N=10
	p= ---	p=.000**	p=.330	p=.078	p=.024*	p=.004**	p=.037*	p=.008**	p=.002**
S80/S20	.9677	1.0000	.6202	-.7171	.8414	-.9136	-.6192	-.8867	-.9319
	N=10	N=10	N=8	N=10	N=10	N=10	N=10	N=10	N=10
	p=.000**	p= ---	p=.101	p=.020*	p=.002**	p=.000**	p=.056	p=.001**	p=.000**
poverty	.3968	.6202	1.0000	-.8064	.8477	-.8129	.4222	-.8145	-.8084
	N=8	N=8	N=8	N=8	N=8	N=8	N=8	N=8	N=8
	p=.330	p=.101	p= ---	p=.016*	p=.008**	p=.014*	p=.297	p=.014*	p=.015*

Variable	GiniSR	S80/S20	poverty	empl. abroad	unempl.	immi-grants	emi-grants	increase	migration
empl. abroad	-.5811	-.7171	-.8064	1.0000	-.9028	.9475	.7597	.9253	.9528
	N=10	N=10	N=8	N=13	N=13	N=13	N=13	N=13	N=13
	p=.078	p=.020*	p=.016*	p=---	p=.000**	p=.000**	p=.003**	p=.000**	p=.000**
unempl.	.6994	.8414	.8477	-.9028	1.0000	-.9374	-.6960	-.9264	-.9342
	N=10	N=10	N=8	N=13	N=13	N=13	N=13	N=13	N=13
	p=.024*	p=.002**	p=.008**	p=.000**	p=---	p=.000**	p=.008**	p=.000**	p=.000**
immigrants	-.8135	-.9136	-.8129	.9475	-.9374	1.0000	.7292	.9909	.9945
	N=10	N=10	N=8	N=13	N=13	N=13	N=13	N=13	N=13
	p=.004**	p=.000**	p=.014*	p=.000**	p=.000**	p=---	p=.005**	p=.000**	p=.000**
emigrants	-.6629	-.6192	.4222	.7597	-.6960	.7292	1.0000	.6304	.7970
	N=10	N=10	N=8	N=13	N=13	N=13	N=13	N=13	N=13
	p=.037*	p=.056	p=.297	p=.003**	p=.008**	p=.005**	p=---	p=.021*	p=.001**
increase	-.7784	-.8867	-.8145	.9253	-.9264	.9909	.6304	1.0000	.9713
	N=10	N=10	N=8	N=13	N=13	N=13	N=13	N=13	N=13
	p=.008**	p=.001**	p=.014*	p=.000**	p=.000**	p=.000**	p=.021*	p=---	p=.000**
migration	-.8399	-.9319	-.8084	.9528	-.9342	.9945	.7970	.9713	1.0000
	N=10	N=10	N=8	N=13	N=13	N=13	N=13	N=13	N=13
	p=.002**	p=.000**	p=.015*	p=.000**	p=.000**	p=.000**	p=.001**	p=.000**	p=---

Source: Own processing

### 3 Conclusions

This paper has analyzed the problem of poverty examined from the statistical perspective of connections with unemployment and migration in the regions of Slovakia. Among the selected variables are shown in some regions significant dependencies, namely between the number of local citizens living below the poverty line, the number of Slovak citizens working abroad and the number of unemployment persons. On the other hand, poverty and number of displaced people is in no relationship in any region. However, statistical perspective does not cover the entire width of the problem, especially when analyzed short, only 13 annual data and if definition of poverty is disputable. The new insights into the issue could bring panel data analysis. This analysis has to be applied not on absolute numbers of persons, which was there available, but on relative values.

Poverty is primarily an ethical problem with a large number of ethical issues at the macro level. While it is a general problem for the EU as a whole in this context, when understood at a certain level of systematics it has an even greater impact on the overall development of the Slovak economy. By (Michálek, 2000), the evaluation of regional poverty in Slovakia shows it is prevalent in areas with low economic growth, where there is generally a low level of income (mainly due to high unemployment and dependence on governmental social support for a considerable part of the population), as well as strong pressure for survival and resource consumption. As a result, national resources are left concentrated in investment activity and capital accumulation. In all of these regions, where there is a backwards economic structure which is dependent on light industry, the population suffers from high levels of unemployment. A long-term lag in technological development meant that in these regions there is usually no modern infrastructure, which is one of the most important conditions for the securing foreign capital and foreign direct investment. Internal social indicators illuminate many of the problems associated with long-term unemployment, social dependence, poor market development, poor demographic composition of the population and so on. These parameters and characteristics



indicate a substantial increase in poverty and a reduction in the social quality of life at the individual level.

It is impossible to ignore poverty as some sort of latent condition that sooner or later passes away. The best course of action to reduce poverty is to create new jobs and use new ways to promote employment, for example in the field of education (Kot and Slusarczyk, 2011). For long-term unemployment is a major cause of poverty and eliminating it requires tough employment policies. Another contribution to poverty is also weak support for families with children, coupled with low social assistance benefits. The state should invest more effort in social security and seek funding to support social security.

## Acknowledgements

This work is supported by grant KEGA 037PU-4/2014 and by Faculty of Management, University of Prešov.

## References

- JENČOVÁ, S., LITAVCOVÁ, E. 2013. Analysis of Macroeconomic problem of poverty in Slovakia. In: *International journal of Science Commerce and Humanities*. Vol 1, No 4, pp. 140-150. ISSN 2052-6164.
- JUREČKA, V. 2010. *Mikroekonómie*. Praha: Grada, 2010. ISBN 978-80-247-3259-6.
- KOT, S., ŚLUSARCZYK, B. 2011. Logistic Education as a Way for Unemployment Reduction, Proceeding of the IETEC'11 Conference, Kuala Lumpur, Malaysia, 2011.
- LACA, S. 2011. Actual aspects of poverty in a Slovak society. In: *Prohuman – vedecko-odborný internetový časopis*. ISSN 1338-1415. <http://www.prohuman.sk>
- MAREŠ, P. 1999. *Sociologie nerovnosti a chudoby*. Sociologické nakladatelství SLON. Praha, 1999, s. 248.
- MICHÁLEK A. 2000. Chudoba, jej koncepty a geografické dimenzie. Poverty: concepts and geographic dimensions. In: *Geografický časopis*, 52, 2000, 3, 1 figs., 15 refs.
- PARKIN, M. 1990. *Macroeconomics*. Addison-Wesley Publishing Company, Inc., 1990. ISBN 0-201-09445-2.
- PAUFOVÁ, I., ŽELINSKÝ, T. 2012. Nerovnosť a chudoba v Európskej únii a na Slovensku. In: *Zborník statí*. Košice: TUKE, 2012. ISBN 978-80-553-1225-5.
- VELČICKÁ, J., VLAČUCHA, R. 2011. EU SILC 2010. *Indikátory chudoby a sociálneho vylúčenia*. Bratislava: Štatistický úrad Slovenskej republiky, 2011.
- VLAČUCHA, Róbert a Yvona KOVÁČOVÁ, 2013. EU SILC 2012. Indikátory chudoby a sociálneho vylúčenia. Bratislava: Štatistický úrad Slovenskej republiky. [cited 18. Júna 2014]. ISBN 978-80-8121-242-0. Available At: [http://portal.statistics.sk/files/indikatory\\_2012\\_vystavit.pdf](http://portal.statistics.sk/files/indikatory_2012_vystavit.pdf)